

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

REC'D 09 MAR 2004

WIPO PCT

Applicant's or agent's file reference WOP14103A	<b>FOR FURTHER ACTION</b>		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/GB 03/00096	International filing date (day/month/year) 13.01.2003	Priority date (day/month/year) 11.01.2002	
International Patent Classification (IPC) or both national classification and IPC A61K7/06			
Applicant COSMETIC WARRIORS LIMITED et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
  - This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.
3. This report contains indications relating to the following items:
  - I  Basis of the opinion
  - II  Priority
  - III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV  Lack of unity of invention
  - V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI  Certain documents cited
  - VII  Certain defects in the international application
  - VIII  Certain observations on the international application

Date of submission of the demand 11.08.2003	Date of completion of this report 05.03.2004
Name and mailing address of the International preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Molina de Alba, J Telephone No. +49 89 2399-7823

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB 03/00096

## I. Basis of the report

1. With regard to the elements of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):

<b>Description, Pages</b>	
1, 3-9	as originally filed
2, 10	filed with telefax on 08.12.2003
<b>Claims, Numbers</b>	
1-19	filed with telefax on 08.12.2003
<b>Drawings, Sheets</b>	
1/2-2/2	as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. The amendments have resulted in the cancellation of:**

- the description, : pages:
- the claims, : Nos.:
- the drawings, : sheets:

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5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).  
*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	1-19
	No: Claims	
Inventive step (IS)	Yes: Claims	1-19
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations

**see separate sheet**

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**1) Reference is made to the following documents:**

- D1:** WO 01 82889 A (AMBROSEN HELEN ;LUSH LTD (GB); CONSTANTINE MARGARET (GB); CONSTANT) 8 November 2001 (2001-11-08)
- D2:** WO 02 47634 A (LUSH LIMITED) 20 June 2002 (2002-06-20)
- D3:** US-A-4 344 446 (EHRHARDT HORST) 17 August 1982 (1982-08-17)
- D4:** EP-A-0 823 252 (VEDA CORP A) 11 February 1998 (1998-02-11)

**2) The present application relates now to hair conditioning solid emulsions comprising at least one hair conditioning agent and at least one solidifying ingredient; wherein the at least one solidifying agent comprises cocoa butter and the product is prepared from a mixture including 10% to 50% by weight of the cocoa butter.**

**3) The amendments filed by the Applicant with fax of 08.12.2003 fulfil the requirements of Article 34(2)(b) PCT. They are therefore allowable.**

**4) Re Item V**

**4.1 Novelty (Art. 33(2) PCT)**

Document **D2** has been published after the priority date (11.01.2002) but before the filing date (13.01.2003) of the present application. In the case where the priority of the present application has been validly claimed, **D2** is not regarded as prior art according to Rule 64.1(b)(ii) PCT. However, if the priority of the present application turns out not to be validly claimed, this document may be considered as relevant prior art within the European examination procedure, for the assessment of novelty according to Article 54(3) EPC.

No other document in the available prior art discloses a composition or a method as in independent claims 1 and 17. The presently claimed subject-matter is therefore regarded as novel.

**4.2 Inventive Step (Art. 33(3) PCT)**

Documents **D3** and **D4**, which are regarded as the closest state of the art, disclose solid shampoo and hair conditioning emulsions (see **D3**, col. 5, l. 16- col. 6, l. 10 and examples 1-2; **D4**, pg. 7, l. 39-44). Claim 1 differs from **D3** and **D4** in that one of the solidifying agents

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is cocoa butter. The problem to be solved by the present application may thus be regarded as providing **alternative solid emulsions for the conditioning of the hair.**

Document **D1** discloses (see abstract and pg. 3, last par. to pg. 4, par. 2) solid cosmetic emulsions for the **treatment of the skin**, comprising 16-76 % by weight cocoa butter and a method for the preparation thereof. There is however no hint in **D1**, which suggests the application of the method disclosed therein, in the preparation of solid emulsions for conditioning the hair. The skilled person would thus find no motivation to combine **D3** or **D4** with **D1**. Therefore, the presently claimed subject-matter is regarded as inventive.

**4.3 Industrial applicability (Art. 33(4) PCT)**

Is acknowledged for the whole set of claims.

Ideally, the distribution of the conditioner and the shampoo in the bar enables the user to apply both to the hair at the same time. The arrangement of the two phases may be as shown in figures 1 to 3, each of which shows a shape 3 of solid shampoo and conditioner.

As figures 1 and 2 show, the shampoo 2 or alternatively the conditioner 1 can form the middle of the bar 3. As figure 3 shows, patterns such as a spiral may be formed through the bar with one or the other of the phases. It is also possible to merge the two formulations together to form a homogenous mixture. The bars may be in small individual shapes or large cakes which can be cut into smaller portions.

Of course the general aesthetic appeal and marketing possibilities of such a combined solid shampoo and conditioning product, as well as the other features, are the same as for the solid conditioning product alone.

The foregoing description has been given by way of example only and it will be appreciated by a person skilled in the art that modifications can be made without departing from the scope of the present invention as defined by the appended claims.

In addition, conventional conditioners require preservatives to prevent the growth of microorganisms therein. However, such preservatives have the disadvantages of irritating users' skin and reduced biodegradability.

There is an increasing awareness of environmental issues, particularly with regard to the disposal of product packaging and the like. The present invention has been made against this background.

According to one aspect of the present invention, there is provided a cosmetic hair conditioning product, the product having the form of an emulsified solid composition and comprising at least one hair conditioning ingredient and at least one solidifying ingredient; wherein the at least one solidifying ingredient comprises cocoa butter and the product is prepared from a mixture including 10% to 50% by weight of the cocoa butter.

According to a further aspect of the present invention, there is provided a method of fabricating an emulsified solid form cosmetic hair conditioning product, comprising mixing a plurality of ingredients so as to provide a mixture including at least one hair conditioning ingredient and cocoa butter, warming the mixture to a temperature within a range of from about 45°C to about 60°C, allowing the mixture to cool, applying further mixing of the mixture when the mixture has attained a temperature within a range of from about 35°C to about 25°C, and allowing the mixture to cool further to provide the emulsified solid form hair conditioning product.

Since the cosmetic product has the form of a solid, there is no requirement for a plastic container and there is a consequentially beneficial reduction in costs and avoidance of environmental pollution. In addition, the present invention can provide appealing novelty items.

Documents WO-02-47634A, US-A-4344446, EP-A-0823252 and WO-03-000205A disclose various forms of hair conditioning products. Document WO-01-82889A discloses various cosmetic lotions.

Embodiments of the present invention will now be described in more detail and by way of further example only, with reference to the drawings, each of which shows a cross-section of a product according to the present invention.

14. A solid hair treatment product according to any one of claims 10 to 13, wherein the cosmetic product and the shampoo form a pattern.

15. A solid hair treatment product according to claim 14 wherein the pattern is arranged to enable contemporaneous application of the cosmetic product and the shampoo to the hair of a user.

16. A solid hair treatment product according to claim 15 wherein the pattern comprises a spiral pattern.

17. A method of fabricating an emulsified solid form cosmetic hair conditioning product, comprising mixing a plurality of ingredients so as to provide a mixture including at least one hair conditioning ingredient and cocoa butter, warming the mixture to a temperature within a range of from 45°C to 60°C, allowing the mixture to cool, applying further mixing of the mixture when the mixture has attained a temperature within a range of from 35°C to 25°C, and allowing the mixture to cool further to provide the emulsified solid form hair conditioning product.

18. A method according to claim 17 wherein the further mixing is provided when the mixture has attained a temperature of between 27°C and 30°C.

19. A method according to claim 17 or 18 wherein one of the ingredients is selected to comprise water up to 25% by weight of the mixture.

7. A cosmetic product according to any one of the preceding claims, wherein the at least one conditioning ingredient comprises at least one of propylene glycol, cetearyl alcohol, sodium lauryl sulfate, lanolin, soya lecithin and cetrimonium bromide.

8. A cosmetic product according to any one of the preceding claims, further comprising up to 25% by weight of water.

9. A cosmetic product according to any one of the preceding claims, further comprising 5% to 25% by weight of at least one of herbs, fruits and vegetables.

10. A solid hair treatment product, comprising a shampoo and a cosmetic product according to any one of the preceding claims.

11. A solid hair treatment product according to claim 10, comprising substantially 30% to 70% by weight of the shampoo and 70% to 30% by weight of the cosmetic product.

12. A solid hair treatment product according to claim 10 or claim 11, wherein the cosmetic product is surrounded by the shampoo.

13. A solid hair treatment product according to claim 10 or claim 11, wherein the shampoo is surrounded by the cosmetic product.

**CLAIMS**

1. A cosmetic hair conditioning product, the product having the form of an emulsified solid composition and comprising at least one hair conditioning ingredient and at least one solidifying ingredient; wherein the at least one solidifying ingredient comprises cocoa butter and the product is prepared from a mixture including 10% to 50% by weight of the cocoa butter.
2. A cosmetic product according to claim 1, comprising as a solidifying ingredient at least one of glyceryl stearate, PEG 100 stearate and stearic acid.
3. A cosmetic product according to claim 2, prepared from a mixture including up to 20% by weight of at least one of glyceryl stearate, PEG 100 stearate and stearic acid.
4. A cosmetic product according to any preceding claim, wherein one solidifying ingredient comprises cetearyl alcohol and sodium lauryl sulfate.
5. A cosmetic product according to claim 4, prepared from a mixture including 6% to 37% by weight of cetearyl alcohol and sodium lauryl sulfate.
6. A cosmetic product according to any preceding claim, wherein one solidifying ingredient is also a hair conditioning ingredient.

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